Executive Summary

INTRODUCTION

The City of Long Beach, at a minimum, expends more than $25 million annually on technology. Current and planned projects for FY'06-FY'07 are projected to exceed $55 million. The City's workforce spends at least 50% of each day using technology tools. Yet, technology is neither perceived nor managed as a strategic asset.

There is no well-defined city-wide vision of technology that is embraced by the leadership, so it develops technology in an uncoordinated piecemeal manner that does not address enterprise-wide business needs, limits operational benefits, and is extremely costly.

Technology change is rapid, constant, and challenging. Technology has drastically changed the workplace environment. It has created a demand for new:

- Technology skills
- Language to communicate
- Customer practices
- Governance policies
- Management oversight
- Employee accountability
- Service delivery alternatives

While many of the changes in technology involve electronic tools and their expanded capabilities, technology has also changed the organizational focus regarding how services are provided, and by whom they are provided, and to whom. In most organizations, the service delivery model adapts to the corresponding changes in the design, capabilities, and management of technology.

As technology trends have evolved, so has the responsibility for managing technology. It has transitioned from the computer room to the boardroom. It is now incumbent for policy makers to have a vision and plan on how technology, as a strategic tool, will enhance and support their financial and service missions.

In September 2005, the City of Long Beach (the City) engaged the firm of Bartig, Basler & Ray (BB&R) to conduct an Information Technology Optimization Study.

The focus of the study was an operations review of how the City uses technology to meet its mission, make policy decisions, enforce accountability, and evaluate performance. Specifically, the City desired to identify ways to reduce costs and improve service levels in the delivery of information technology services. However, as discussed with the Study Development Team (SDT), the reduction of costs was not expected to be a major finding of this

study because, expansive and detailed cost-analysis was not included within the final scope of the study.

Approach

In order to provide guidance to the consultant team and facilitate stakeholder involvement, the City created an Information Technology Study Development Team. In addition, the City was responsible for some activities of this project. Those activities have been incorporated into this report.

Since technology crosses all components of the City's organization, we recommended the Information Technology Optimization Study be conducted by taking a cross-organizational view of activities, services, and benefits. This approach provided insights to the overall effectiveness, efficiency, and economy of effort of the City's use of technology without regard to artificially-created divisions such as program, structural units, personnel classification, budget appropriation, management responsibility, or authorization power.

Methodology

To secure the broadest representation and input from staff and interested parties several input modes for eliciting information were adopted within the study approach. Input modes included:

- Conducting interviews with key stakeholders
- Reviewing key documents
- Conducting focus groups
- Developing an electronic survey
- Conducting drop-in informational exchanges
- Receiving information via an email address
- Researching information

Report Format

The Scope of Work identified three areas to be reviewed:

- Governance
- Service Delivery Approaches
- Organization and Management

These areas are addressed in the report sections of Assessment and Findings and Recommendations and Implementation Plan.

BACKGROUND AND UNDERSTANDING

In 2002 the City experienced a major structural deficit of $102 million creating the need to evaluate and implement significant cost reduction measures, optimize service delivery alternatives, and examine revenue enhancement opportunities.

Achieving a balanced budget became the principle focus of City officials. This priority was echoed throughout both the community and the organization. The City developed and implemented a Three-Year Financial Strategic Plan to address the shortfall.

Technology planning and acquisition continued during this three to five-year period. An Information Systems Master Plan (ISMP) was developed, a Customer Scan regarding technology services was conducted, and an initiative for an Enterprise Resource Planning (ERP) system was considered. Also, outsourcing technology was an option identified in the City's Three-Year Financial Strategic Plan.

The City instituted a hiring freeze, which did not allow for replacement of personnel. This created a work environment resulting in less staff but little change in service expectations from both internal and external customers. Many of the departments have attempted to do more with less, postponed expenditures, and held-the-line on all but essential expenditures. These actions have greatly impacted the current work environment.

CURRENT TECHNOLOGY ENVIRONMENT

The current operating environment of the City has many challenges regarding technology. Legacy systems, fragmented systems, old equipment, and new technologies have strained the current capacity to plan, guide, service, and support technology consistently throughout the organization.

The City's leadership encourages management and employees to be innovative, creative and entrepreneurial. While this creates a change-oriented environment, it has resulted in departments having a very strong focus on how best to solve their particular needs with little attention given to creating more internal coordination, collaboration, and communication regarding City-wide information technology use and/or projects.

The budgeting process greatly impacts the current technology operating environment. Technology-related projects that require General Fund funding are included in a review required by the annual City budget process. However, if grant funds are available for technology-related projects, they may not be required to undergo the same level of scrutiny and decision making as required of General Fund projects.

Technology Service Department (TSD) management is taking steps to change their department's operating culture by instituting a customer service focus. It has:

- Established regular meetings with departments
- Made some improvements to the Help Desk

- Worked to redirect Citizens' Technology Advisory Committee (CTAC)

Overall, TSD is perceived as customer service-oriented, cooperative, and doing the best it can, given the constraints from the fiscal crisis.

City at a Crossroad

It appears that the City is at a crossroad in how it will manage technology. The City can continue to view technology as merely a support tool for current operations or it can embrace technology as a enterprise-wide strategic resource that will change operations, enhance services, and create greater cost saving/avoidance options for the organization.

The results of this study will hopefully assist the City in making significant changes in how technology is valued and perceived within the organization.

ASSESSMENT AND FINDINGS

The scope of the study required an assessment of technology across the City (all departments reporting to the City Manager). While technology exists within all these departments, we found many variances between departmental operations. We believe the variances are a result of the autonomy given to departments, differing management styles, long-established processes and procedures, funding sources, and relationships with decision makers.

We have organized this report to reflect three enterprise-wide areas. Each area contains related key topics. Some of the key topics appear in several of the findings, as many findings are interrelated. The recurrence of key topic areas reinforces and substantiates the importance of the finding itself. These three areas are:

- Governance
- Service Delivery
- Management Practices

GOVERNANCE – Information technology policy making, strategy development, and standardization. The specific aspects of governance that were evaluated include:

- Enterprise-wide view
- Governance process
- Information technology as an enterprise-wide strategic asset
- Investment in technology
- Advisory committees

The **findings** for Governance were:

*Enterprise-wide view***:** The lack of coordination and collaboration among departments, systems, and services does not allow for the sharing of data or resources and does not permit the City as an enterprise to fully benefit from technology.

Governance process: There is inadequate communication and coordination of information technology. This includes priority-setting, purchases, development, implementation, budgeting, oversight, and accountability. This results in duplication of effort, fragmented systems, and is not cost effective.

Information technology as an enterprise-wide strategic asset: The City is managing technology in a piecemeal manner, resulting in management being deprived of an enterprise-wide view and a strategic resource to improve operations.

Investment in technology: The current disparate systems, including those under development, will not necessarily result in enterprise-wide benefits and will likely cost more to maintain than newer integrated technologies.

Advisory committees: Advisory committees are not utilized to their fullest potential.

SERVICE DELIVERY – Information technology resource deployment, roles, and responsibilities. The specific aspects of service delivery that were evaluated include:

- Organization structure
- Information technology leadership
- Outsourcing

The **findings** for Service Delivery were:

Organizational structure: The current citywide technology organizational structure does not best support operations, throughout the enterprise, and does not align technology with the departments' business goals and objectives.

Information technology leadership: The City of Long Beach does not have a Chief Information Officer to direct the City's information technology vision and participate in the City's executive decision-making processes.

Outsourcing: Selective outsourcing may be a cost-effective approach, if done correctly and aligned with the City's overall business and strategic objectives.

MANAGEMENT PRACTICES – The practices and processes used to manage information technology assets. The specific aspects of management practices that were evaluated include:

- ISMP
- Communications
- User support and help desk services
- Fiscal focus
- Training
- Aging technology
- Acquisition processes
- Project management
- Resource skill mix
- Chargeback system

The **findings** for Service Delivery were:

ISMP: The ISMP is not the blueprint for technology in the City.

Communications: Communications regarding information technology is not as effective as it could be across the enterprise.

User support and help desk services: Users are not receiving consistent and reliable information technology support and help desk services.

Fiscal focus: The impact of short-term decisions is the reduction of the long-term value realized from the City's information technology investments.

Training: Without a viable training program, the City is paying a price for not investing in its employees.

Aging technology: As equipment and software age, departmental staff may have increased difficulty in providing service to the public. In addition, the cost to maintain the existing legacy systems may continue to increase as it becomes more difficult to find individuals who are able to support these systems.

Acquisition processes: The current acquisition process is cumbersome and does not meet user expectations for timeliness. The lack of technology standards makes it difficult to manage the information technology acquisition process and future customer service demands.

Project management: The lack of strong project management skills and processes within TSD and the City potentially increases the risk and cost of implementing large expenditure projects.

Resource skill mix: The City does not have the appropriate mix of technical resources and skills in-house to meet the City's future technical needs and the public's demand.

Chargeback system: The chargeback system is an internally-focused exercise that is costly, time consuming, and provides limited value to the City.

RECOMMENDATIONS

GOVERNANCE: Governance Process

RECOMMENDATION G-1: ADOPT A NEW GOVERNANCE STRUCTURE AND PROCESS

The adoption of a more formalized process that is supported at the executive level will enable the City to achieve organizational goals, establish successful management practices, and achieve accountability of its information technology projects from inception to maintenance.

RECOMMENDATION G-2: ESTABLISH CLEAR ROLES AND RESPONSIBILITIES TO STRENGTHEN THE GOVERNANCE PROCESS

In establishing a new governance model for the City, it is critical that clear roles and responsibilities be established for all of the participants in the governance processes. We

recommend the following have specified roles and responsibilities regarding information technology planning, the funding approval process, and ongoing monitoring and accountability:

- City Manager (decision making)
- Chief Information Officer (recommends strategic policies to City Manager
- Information Systems Policy Committee (recommends approval and provides on-going accountability)
- Technology Review Group (provides input regarding planning, standards review, technology feasibility and compliance)
- Citizen Technology Advisory Committee (provides input from a stakeholders perspective)

RECOMMENDATION G-3: CREATE A CITY CIO POSITION

A strong governance structure and process requires strong information technology leadership. Other like-sized cities have taken this approach to strengthen their effectiveness of technology

RECOMMENDATION G-4: INCLUDE CIO IN THE POLICY PROCESS

The CIO should provide input to the decision makers about the impact of policy decisions on the overall technology delivery of the City.

SERVICE DELIVERY: Information Technology Organizational Structure

RECOMMENDATION SD-1: RESTRUCTURE TSD

If information technology is to be viewed as a critical resource of the City, the Information Technology Department (ITD) needs to be at a level in City management to understand, contribute and be part of the City's vision and business strategy. It also needs to be restructured to better serve its internal and external customers.

RECOMMENDATION SD-2: CREATE BUSINESS ANALYST POSITIONS TO SUPPORT TECHNOLOGY SERVICE DELIVERY

In order to manage information technology as a City-wide asset, departments should be provided individualized support. These individuals could be part of the new ITD or have an indirect "dotted line" reporting relationship to the technology department. This structure allows the departments to continue to meet their own needs internally where it is warranted, provide training and support to these departmental resources, and allow the CIO to facilitate overall information technology governance City-wide through ensuring standard support and quality of technical operations.

RECOMMENDATION SD-3: REDEFINE TECHNOLOGY LEADERSHIP: HIRE A CIO

The City of Long Beach should hire a CIO with the authority to establish information technology vision, policies and standards, and to implement the governance structure and

processes. In addition, this will require a combination of leadership, management, and technical skills to lead the development, implementation, and oversight of the City's technology vision and resources. The CIO has to report directly to the City Manager.

SERVICE DELIVERY: Outsourcing

RECOMMENDATION SD-4: THE CITY SHOULD CONSIDER LIMITED OUTSOURCING AT THIS TIME

The process of considering and/or implementing an outsourcing solution must be systematic, fully documented and enforced to achieve the desired results of a successful outsourcing implementation. This demands a multi-step approach, including planning, analysis, design, implementation, and operations phases, along with a contingency exit strategy. Unless these described elements are in place, any cost savings would not be realized.

Currently, the City can continue to benefit from the use of third party service providers to perform non-core information technology services. However, based upon the state of the City's current information technology activities and the levels of outsourcing options (individual, functional, and/or facilities management), the City is neither prepared for, nor should outsource, its entire information technology function.

However, there are some limited opportunities that may be favorable for short term information technology outsourcing and could assist the City in moving to a new information technology organizational structure and governance process. They are:

- Consolidate current PC desktop / laptop procurement
- Expand initial software setup program to include all approved / published standard software including security, spyware, monitoring, groupware, etc.
- PC desktop / laptop hardware maintenance service and replacement
- Consolidate printer acquisition and support services
- Training (technical staff and end-users)

MANAGEMENT PRACTICES: Information Systems Master Plan

RECOMMENDATION MP-1: UPDATE AND FORMALLY ADOPT THE ISMP BASED UPON THE CURRENT SITUATION, DEVELOP AN IMPLEMENTATION PLAN AND COMMUNICATE THE PLAN THROUGHOUT THE CITY.

The ISMP should be formally adopted as the policy for all City technology development and operations. This plan should be the blue print for all decision making for future technology planning, and acquisitions.

MANAGEMENT PRACTICES: Communications

RECOMMENDATION MP-2: THE CITY SHOULD DEVELOP A COMPREHENSIVE COMMUNICATIONS PLAN FOR ALL TECHNOLOGY-RELATED ITEMS.

A comprehensive communications plan focuses on three items:

1. What should be communicated?
2. Who is the audience that should receive this information?
3. How should the information be conveyed?

The communication plan should address communications from the top down, from the bottom up and sideways throughout the organization, especially across departments.

MANAGEMENT PRACTICES: User Support and Help Desk Services

RECOMMENDATION MP-3: ENHANCE HELP DESK PROCEDURES

The current TSD customer support focus should be consolidated into one bureau from an organizational perspective. This would maintain the single point of contact for issues (the Help Desk) and would also have all individuals tasked with resolving issues utilizing the same tracking and reporting system, so a user can be aware of status.

MANAGEMENT PRACTICES: Fiscal Focus

RECOMMENDATION MP-4: VIEW TECHNOLOGY DECISIONS ON A LONG-TERM BASIS, CONSIDERING THE LIFECYCLE OF COSTS AND BENEFITS RATHER THAN THE CURRENT FISCAL YEAR COST IMPACT.

The CIO should develop an analysis of the current situation and prepare a roadmap to the future, utilizing the ISMP as a starting point, but updating it to reflect the changes that have taken place. This roadmap should include realistic investments in technology, applications and people, both in ITD and in the departments as well as establish priorities for the enterprise as a whole.

Realistic cost/benefit analyses should be undertaken when viewing technology decisions and should include both the hard and "soft" costs of both new systems versus doing nothing, or maintaining the status quo. The Finance Department and maybe the City Auditor's Office should be participants, or at least reviewers, of multi-year cost/benefit analyses.

MANAGEMENT PRACTICES: Training

RECOMMENDATION MP-5: ESTABLISH A FORMAL TECHNOLOGY TRAINING PROGRAM.

Although a comprehensive and professional information technology education curriculum, training program, and evaluation method is needed within the City it is acknowledged that this may not be achievable in the short term due to competing priorities, budget restraints and organizational preparedness. However, without immediately re-establishing a training program, the City will likely be faced with increasing technology problems and loss of efficiency within its information technology and system application user workforce. Technology training should be for both the technology providers in ITD and the users in the departments.

MANAGEMENT PRACTICES: Aging Technology

RECOMMENDATION MP-6: ESTABLISH A SCHEDULE AND TIMEFRAME TO REPLACE AND RETIRE THE CITY'S LEGACY SYSTEMS.

The City has begun the process of replacing some legacy applications; however there are a large number of significant applications that are not yet scheduled for replacement (e.g. financials). The recent experience in looking at ERP solutions has provided the City with a reasonable estimate of the overall cost of replacing these legacy systems. The City needs to determine a reasonable timeline for replacement, determine how to fund the changes and include this information in an updated ISMP.

MANAGEMENT PRACTICES: Technology Acquisition Process

RECOMMENDATION MP-7: CHANGE THE ACQUISITION PROCESS TO PROVIDE MORE ACCOUNTABILITY AND RESPONSIBILITY TO THE DEPARTMENT HEADS AND CITY CIO.

The City should eliminate the requirement that departments obtain budget office support for the purchase of technology equipment and supplies over $500. Instead, the requirement should be that the purchases be reviewed by ITD to ensure that the proposed equipment conforms to City standards. If the purchase conforms to standards, it should be the responsibility of the department head to authorize the technology purchase, regardless of cost, in the same manner as other expenditures. If the proposed equipment is not within the City standards, then the department should be required to obtain the CIO's approval to deviate from the standards or search out equipment that does meet standards.

RECOMMENDATION MP-8: AUTOMATE THE PROCESS TO REQUEST EQUIPMENT AND SOFTWARE.

ITD should automate the process to request equipment and software. Forms should be available on the Intranet that can be completed electronically, forwarded to the proper approving authority in the department for signature, either automatically using a workflow engine or via email, and then submitted to ITD for review of conformance to standards and processing. There should also be a way to track the progress of a request and determine its status throughout the process.

RECOMMENDATION MP-9: ITD SHOULD OUTSOURCE THE SETUP OF PERSONAL COMPUTERS AND WIRELESS DEVICES.

As part of the acquisition process ITD should proceed with outsourcing the initial setup / standard configuration of personal computers and wireless devices (e.g. the Blackberry). This will improve customer service and satisfaction by reducing the time required to actually install a device for a user and have it operational. Outsourcing will also free ITD staff from these initial setup/configuration tasks and allow for redeployment to other value-added services.

MANAGEMENT PRACTICES: Project Management

RECOMMENDATION MP-10: THE CITY SHOULD IDENTIFY THOSE POSITIONS WHERE PROJECT MANAGEMENT IS A PRIMARY FUNCTION OF THE JOB AND REQUIRE CERTIFICATION FOR NEW HIRES AND PROMOTIONS.

There are a number of technology positions within ITD, and possibly within some departments, where project management is the primary function of the job. These positions should be identified and job descriptions changed to require project management certification. As any of these positions becomes vacant, one of the requirements should be a project management certification (e.g. Project Management Professional (PMP) from Project Management Institute; or information technology Project+TM from CompTIA. For those incumbents who do not have the certification, the City should provide incentives for staff to obtain certification, including enrollment in training classes, payment for certification testing and payment for PMI membership dues and events.

MANAGEMENT PRACTICES: Resource Skill Mix

RECOMMENDATION MP-11: THE CITY SHOULD CONDUCT A DETAILED SKILLS INVENTORY FOR ALL INFORMATION TECHNOLOGY STAFF

As the City moves to replace the legacy systems, there will be a gap between current staff skills and skills needed by the newer systems. The CIO should manage the development of an inventory of existing skills for all technology positions, both within the ITD and in departments. This inventory of skills should be compared to the skill sets expected to be needed in the future. This can be the basis for the CIO to determine a staffing and hiring plan. This process should also include a position classification and compensation review.

RECOMMENDATION MP-12: DEVELOP TRAINING PLANS FOR INFORMATION TECHNOLOGY STAFF

Based on the skills inventory results, the CIO should work with bureau managers and staff members to develop individual training plans. These plans should be focused on the development of requisite skills to support the technology needs of the City. As with the skills inventory, we recommend developing training plans for those technology staff both within the ITD and in departments. The training plans should include both technical and project management courses. These plans should be updated on an annual basis and can be included as part of the annual evaluation process.

RECOMMENDATION MP-13: DEVELOP A RECRUITMENT PLAN TO OBTAIN THE NECESSARY TECHNOLOGY SKILLS THAT ARE REQUIRED FOR THE FUTURE

Once the skill inventory has been established and the training plans developed, there will probably be some gaps in skills that will need to be filled based upon realistic expectations of skill development of existing staff. This may result in recruitment from the outside to replace existing managers and supervisors who retire, rather than promoting from within if skill sets are missing. This may also result in the creation of additional technology positions, both within ITD and the departments, to obtain specific skill sets. Especially in the public safety areas (Police and Fire), the City should have dedicated technology individuals in positions of responsibility rather than uniformed officers acting as technologists.

RECOMMENDATION MP-14: THE CITY SHOULD DEVELOP SUCCESSION PLANS FOR KEY TECHNOLOGY-RELATED POSITIONS.

This planning process should start with all key positions where the incumbent could retire within the next three years and then be expanded to cover all key technology positions within the City. These succession plans should be integrated with the training plans to make sure that the people who are moving up in the organization obtain the proper skills to manage in the future.

MANAGEMENT PRACTICES: Chargeback System

RECOMMENDATION MP-15: THE CITY SHOULD MOVE FROM A DEPARTMENTAL CHARGEBACK SYSTEM TO A COST ALLOCATION SYSTEM FOR CENTRAL TECHNOLOGY COST DISTRIBUTION

As we understand the City's management philosophy, service delivery costs should reflect all costs, including those central costs not located within a service delivery organization, including technology. However, a chargeback system, as used in Long Beach, results in a significant amount of non-productive City staff time to develop the charges and monthly invoices, create journal entries, review, and resolve any disputed charges.

A more efficient system would include all the fixed costs as part of an indirect cost allocation system (sometimes called an Indirect Cost Allocation Plan used for recovery of administrative costs from federal grants). The calculation of the fixed costs would occur once a year during the budget cycle and the appropriate fixed costs would then be included within the departmental budgets as an allocation. The variable costs would also be calculated at the time

of budget development and would include the current number of cell phones, personal computers, long distance charges, etc., based upon the coming budget year rates. During the budget process, the department could request additional items of variable costs, and these would be reviewed as any other new or additional service request.

IMPLEMENTATION PLAN

The report (at the conclusion of Section VI) includes a detailed Implementation Plan to assist the City in its implementation of accepted recommendations. The Implementation Plan addresses the following elements:

- Recommendation
- Associated Findings
- High-Level Action Steps
- Lead Responsibility
- Support Responsibility
- Performance Measures
- Resource Provider

The recommendations have been listed in priority order to guide the City's decision-making process.